

ABSTRACT

5 A broadband ellipsometer is disclosed with an all-refractive optical system for focusing a probe beam on a sample. The ellipsometer includes a broadband light source emitting wavelengths in the UV and visible regions of the spectrum. The change in polarization state of the light reflected from the sample is arranged to evaluate characteristics of a sample. The probe beam is focused onto the sample using
10 a composite lens system formed from materials transmissive in the UV and visible wavelengths and arranged to minimize chromatic aberrations. The spot size on the sample is preferably less than 3mm and the aberration is such that the focal shift over the range of wavelengths is less than five percent of the mean focal length of the system.